

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Patent Application of: *Mansky et al.*

Serial No. 09/210,485

Group Art Unit: 2857

Filed: December 11, 1998

Examiner: H. Wachsman

For: APPARATUS FOR RAPID SENSOR-ARRAY BASED MATERIALS  
CHARACTERIZATION

Commissioner for Patents  
Washington, D.C. 20231

**AMENDMENT AND RESPONSE**

In response to the Office Action dated December 5, 2001, please  
amend the above-identified application as follows:

CLEAN VERSION OF AMENDMENTS

In the specification:

On Page 78, Line 14, please insert the term --Copen ding-- prior to the  
term "U.S. Application" such that the clean version of the paragraph reads:

91  
In this example, surface launched acoustic wave sensors can be  
fabricated on thin silicon-nitride or etched silicon membranes 174, similar to  
those described above. A piezoelectric material 176, such as zinc oxide, is  
then deposited as a thin layer on top of the membrane to produce an acoustic  
wave sensing device. The physical dimensions of the electrode, such as its  
thickness, size, and configuration, can be adjusted so that the electrode  
operates in, for example, a surface acoustic wave (SAW) resonance mode, a  
thickness shear mode (TSM), a flexural plate wave (FPW) resonance mode,  
or other resonance mode. When the electrode acts as a resonator, its  
resonating response is affected by, for example, the sample's viscosity and  
density. Copen ding U.S. Application No. 09/133,171 to Matsiev et al, filed  
August 12, 1998, describes mechanical resonators in more detail and is  
incorporated by reference herein.